



SEQUENCE LISTING

<110> Schenk, Dale B.
Elan Pharmaceuticals

<120> Prevention and Treatment of Amyloidogenic Diseases

<130> 015270-005913US

<140> US 09/724,953

<141> 2000-11-28

<150> US 09/585,817

<151> 2000-06-01

<150> US 60/137,010

<151> 1999-06-01

<160> 34

<170> PatentIn Ver. 2.1

<210> 1

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:influenza
hemagglutinin HA 307-319 universal T-cell epitope

<400> 1

Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
1 5 10

<210> 2

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PADRE universal
T-cell epitope

<220>

<221> MOD_RES

<222> (3)

<223> Xaa = any amino acid

<400> 2

Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 3

<211> 16

<212> PRT

<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:malaria CS T3
epitope universal T-cell epitope

<400> 3
Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn Val
1 5 10 15

<210> 4
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Hepatitis B
surface antigen HBsAg 19-28 universal T-cell
epitope

<400> 4
Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile
1 5 10

Q2
<210> 5
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:heat shock
protein 65 hsp65 153-171 universal T-cell epitope

<400> 5
Asp Gln Ser Ile Gly Asp Leu Ile Ala Glu Ala Met Asp Lys Val Gly
1 5 10 15

Asn Glu Gly

<210> 6
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:bacillus
Calmette-Guerin universal T-cell epitope

<400> 6
Gln Val His Phe Gln Pro Leu Pro Pro Ala Val Val Lys Leu
1 5 10

<210> 7
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:tetanus toxoid
TT 830-844 universal T-cell epitope

<400> 7

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu
1 5 10 15

<210> 8

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:tetanus toxoid
TT 947-967 universal T-cell epitope

<400> 8

Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser
1 5 10 15

Ala Ser His Leu Glu
20

<210> 9

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HIV gp120 T1
universal T-cell epitope

<400> 9

Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala
1 5 10 15

<210> 10

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:AN90549 (Abeta
1-7/tetanus toxoid 830-844 in a MAP4
configuration)

<400> 10

Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
1 5 10 15

Ile Gly Ile Thr Glu Leu
20

<210> 11

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:AN90550 (Abeta
1-7/tetanus toxoid 947-967 in a MAP4
configuration)

<400> 11

Asp Ala Glu Phe Arg His Asp Phe Asn Asn Phe Thr Val Ser Phe Trp
1 5 10 15

Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
20 25

<210> 12

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:AN 90542 (Abeta
1-7/tetanus toxoid 830-844 + 947-967 in a linear
configuration)

<400> 12

Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
1 5 10 15

a2 Ile Gly Ile Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu
20 25 30

Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
35 40

<210> 13

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:AN 90576 (Abeta
3-9/tetanus toxoid 830-844 in a MAP4
configuration)

<400> 13

Glu Phe Arg His Asp Ser Gly Gln Tyr Ile Lys Ala Asn Ser Lys Phe
1 5 10 15

Ile Gly Ile Thr Glu Leu
20

<210> 14

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:AN90562 (Abeta
1-7/peptide on linear conformation)

<220>
 <221> MOD_RES
 <222> (3)
 <223> Xaa = any amino acid

 <400> 14
 Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Asp Ala Glu
 1 5 10 15

 Phe Arg His Asp
 20

<210> 15
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:AN90543 (Abeta
 1-7 X 3/peptide in linear conformation)

<220>
 <221> MOD_RES
 <222> (24)
 <223> Xaa = any amino acid

Q2
 <400> 15
 Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
 1 5 10 15

 Glu Phe Arg His Asp Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala
 20 25 30

 Ala Ala

<210> 16
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:fusion protein
 with Abeta immunogenic epitope

<220>
 <221> MOD_RES
 <222> (3)
 <223> Xaa = any amino acid

<400> 16
 Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Asp Ala Glu
 1 5 10 15

 Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg
 20 25 30

His Asp

<210> 17
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<220>
<221> MOD_RES
<222> (10)
<223> Xaa = any amino acid

<400> 17
Asp Ala Glu Phe Arg His Asp Ala Lys Xaa Val Ala Ala Trp Thr Leu
1 5 10 15

Lys Ala Ala Ala
20

<210> 18
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 18
Asp Ala Glu Phe Arg His Asp Ile Ser Gln Ala Val His Ala Ala His
1 5 10 15

Ala Glu Ile Asn Glu Ala Gly Arg
20

<210> 19
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 19
Phe Arg His Asp Ser Gly Tyr Ile Ser Gln Ala Val His Ala Ala His
1 5 10 15

Ala Glu Ile Asn Glu Ala Gly Arg
20

<210> 20

<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 20
Glu Phe Arg His Asp Ser Gly Ile Ser Gln Ala Val His Ala Ala His
1 5 10 15

Ala Glu Ile Asn Glu Ala Gly Arg
20

<210> 21
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

Q2 <400> 21
Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr Asp Ala Glu
1 5 10 15

Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg
20 25 30

His Asp

<210> 22
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 22
Asp Ala Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu
1 5 10 15

Lys Leu Ala Thr Asp Ala Glu Phe Arg His Asp
20 25

<210> 23
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 23

Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
1 5 10 15

Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu
20 25 30

Ala Thr

<210> 24

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 24

Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Pro Lys
1 5 10 15

Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
20 25

<210> 25

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 25

Asp Ala Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu
1 5 10 15

Lys Leu Ala Thr Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser
20 25 30

Val Phe Asn Val Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile
35 40 45

Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro
50 55 60

Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe Arg His Asp Asp
65 70 75 80

Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu
85 90 95

Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile
100 105 110

Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro
115 120 125

Lys Val Ser Ala Ser His Leu Glu
130 135

<210> 26

<211> 44

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 26

Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
1 5 10 15

Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
20 25 30

Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
35 40

<210> 27

<211> 51

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope

<400> 27

Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
1 5 10 15

Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
20 25 30

Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe
35 40 45

Arg His Asp
50

<210> 28

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
with Abeta immunogenic epitope on a 2 branched
resin of Lys-Gly-Cys

<400> 28

Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
1 5 10 15

Ile Gly Ile Thr Glu Leu
20

<210> 29
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synuclein
fusion protein in MAP-4 configuration

<400> 29
Glu Gln Val Thr Asn Val Gly Gly Ala Ile Ser Gln Ala Val His Ala
1 5 10 15

Ala His Ala Glu Ile Asn Glu Ala Gly Arg
20 25

<210> 30
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Abeta 1-12
peptide with Cys added

<400> 30
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val Cys
1 5 10

<210> 31
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Abeta 1-5
peptide with Cys added

<400> 31
Asp Ala Glu Phe Arg Cys
1 5

<210> 32
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Abeta 33-42
peptide with Cys added

<220>
 <221> MOD_RES
 <222> (2)
 <223> Xaa = amino-heptanoic acid

<400> 32
 Cys Xaa Gly Leu Met Val Gly Gly Val Val Ile Ala
 1 5 10

<210> 33
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Abeta 13-28
 peptide with Cys added

<220>
 <221> MOD_RES
 <222> (1)
 <223> Xaa = acetyl-asparagine

A2 <400> 33
 Xaa His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser
 1 5 10 15

Asn Lys Gly Gly Cys
 20

<210> 34
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Abeta 42

<400> 34
 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
 1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 20 25 30

Gly Leu Met Val Gly Gly Val Val Ile Ala
 35 40